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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/729,499	12/05/2003	Elfatih Elzein	02-175	1980

27716 7590 04/06/2006

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EXAMINER

BERNHARDT, EMILY B

ART UNIT PAPER NUMBER

1624

DATE MAILED: 04/06/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/729,499

Applicant(s)

ELZEIN ET AL.

Examiner

Emily Bernhardt

Art Unit

1624

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 January 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 and 3-21 is/are pending in the application.
- 4a) Of the above claim(s) 6-11 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3-5,12 and 18-21 is/are rejected.
- 7) ☒ Claim(s) 13-17 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

Applicants' election of Group I subject matter with R1/R2 limited to heteroaryl with traverse in the paper filed on 1/9/06 is acknowledged. The traversal is directed to the lack of a burdensome search and that restriction cannot be made within a claim. This is not persuasive since as stated in MEP 803.02, the requirement for unity of invention is two-fold: (1) common utility and (2) sharing a substantial structural feature disclosed as being essential to that utility. The piperazine ring common to all groups is clearly not solely responsible for activity- applicants' own test data confirms this. Additionally, the claims as **originally presented** for examination are separately classified based on the presence or absence of one or two hetero rings at R1 and/or R2. Carbocycles or chains at both end included within the original claims would be classified in completely different subclasses than the species within the elected invention, namely they would be properly searched in class 544, subclasses such as 380 when tricyclic carbocycles are present and also in 400 when other chains, and carbocyclic rings are present and in class 514 subclass 252.12. When only one heteroaryl is present at either end of R1 or R2, nature of particular het ring present would control classification such as indazole as R1 would be in 544/371; class 514, subclass 254.06 or for chroman, class 544 subclass 376; class 514 subclass 254.11. Finally, there is no evidence of

record that such functional groups as permitted at R1 and R2 are art-recognized for uses relied on herein. Note Zablocki (US'264) of record while not anticipatory in view of applicants' proviso, describes very similar compounds where R1 is phenyl that differ only in being lower homologs of that claimed herein since instant "q" can be 2, etc. Thus the restriction is consistent with applicants' expected urging of patentability for instant elected compounds over US'264 which is only relevant to a small portion of nonelected subject matter. Weber cited by applicants dealt with a rejection of claims under 35 USC 121 and **not** on the propriety of a requirement to restrict. Note Judge Rich's concurrent opinion therein.

Accordingly, the restriction is deemed proper and is therefore made FINAL.

Applicants are advised that the claims will continue to be only examined with respect to subject matter constructively elected, namely R1 and R2 as heteroaryl. Nonelected claims 6-11 are withdrawn. Note in view of applicants' amendments, 6 and 7 now only pertain to nonelected subject matter.

Claim 12 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. It depends on claim 6 which no longer permits R1 to be heteroaryl.

Claims 1,3-5,12 and 18-21 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The list of “phenyl” substituents recited in R1 and R2 rings are not all seen to be described in the disclosure as originally filed. Compare with list presented on p.11 of the specification . “Acetyl” is not seen nor “halogen substituted alkyl”. Deletion of these and insertion of CF₃ as a choice appears would overcome the rejection .

Claims 1,3-5, 12 and 18-21 remain rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement for the reasons set forth in the previous action. The thrust of the rejection was “how to use” for scope being claimed at both R1 and R2 and for “ substituted” derivatives. It is noted that “optionally substituted” also appears in the R17 definition for “phenyl” which is as broad as the scope originally claimed for R1/R2 and thus not adequately supported. While substituents on the R1/R2 rings have been narrowed the scope of heteroaromatics still claimed at both ends of the piperazine ring is not commensurate with the compounds actually made directed to the elected subject matter and the limited test data on p.68-70 which supports the rings previously

pointed out by the examiner. The scope covered by "heteroaryl" as defined in the specification is enormous as it covers mono and polycyclics having as many as 4 hetero atoms in any array. Applicants point to additional compounds on pages 39 to 54 but most of these are to nonelected inventions. Those that are within the instant scope correspond to benzothiazole and benzimidazole (p.40), indazole (p.42), and benzotriazolyl (p.46) as R1 with R2 always being benzothiazole. Thus the embodiments particularly exemplified as useful as fatty acid oxidation inhibitors are not seen to be fairly representative of the scope covered by the claim language which include rings as diverse as purine, pyrazole, indolizine, quinoxaline, quinazoline, cinnoline, pyrido-fused pyrazines, pyrido-fused oxazoles, pyrimido-fused thiophenes, etc. permitted at both ends of the piperazine ring.

Applicants urge that the level of predictability is high based on present understanding of structure activity relationships (SAR) but this point is not further elucidated and thus the examiner is not aware of what scientific reasoning or principle or extrinsic evidence is being relied on. In the absence of such *a priori* knowledge, the skilled artisan would **not** have sufficient information to predict what type of heteroaryl derivatives from among the many covered by the instant scope would be suitable bioisosteric replacements for the small number of compounds made and tested. The fact that assay testing may be routine does not

necessarily preclude a finding of nonenablement given the limited data provided.

Note that in *University of Rochester v. G.D.Searle & CO.* 68 USPQ2d 1424 at 1438 the screening for over 600 compounds was deemed to be undue. Applicants' scope far exceeds this number .

Claims 13-17 remain objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Applicants are reminded to provide the references cited in the IDS of 6/15/04 for consideration as previously requested or to indicate if they are available in a commonly assigned electronic file.

US'099 is cited. While it is directed to heteroaryloxy-2-hydroxypropyl piperazine derivatives, the disclosure is too diffuse to suggest type of substitution required herein at "R¹". There are no specific embodiments of intended heteroaromatics at R² variable in the reference much less any species directed to such.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Emily Bernhardt whose telephone number is 571-272-0664.

If attempts to reach the examiner by telephone are unsuccessful, the acting supervisor for AU 1624, James O. Wilson can be reached at 571-272-0661. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.



Emily Bernhardt
Primary Examiner
Art Unit 1624